



Technical Assistance: Establishment of a skimming well gallery system for agriculture

Location: HDh.Nolhivaranfaru Island, Maldives

Solution: Establishment of an infiltration gallery system for sustainable groundwater extraction to support agricultural practices.

UNEP CTCN grant: USD 286,789



© UNEP-CTCN

Excessive groundwater extraction has led to saline water intrusion in the Maldives, threatening the sustainability of water resources crucial for agriculture and tourism. This project establishes a skimming well gallery system, which provides a sustainable method for groundwater extraction, ensuring a reliable water supply for farming while protecting the island's aquifers.



Objectives

- The primary objective is to enhance water security for agriculture by designing and implementing an infiltration gallery system that allows for sustainable groundwater extraction.
- A reliable water source for irrigation leads to improved agricultural productivity.
- The project also aims to protect groundwater aquifers and promote efficient water use, benefiting tourism and the broader community, as well as government agencies involved in water resource management.



Social Impact

- The project supported a total of 1,822 beneficiaries, including 502 direct beneficiaries and 1,320 indirect beneficiaries.
- Among both the direct and indirect beneficiaries, 50% were women, and 50% of the direct beneficiaries and 25% of the indirect beneficiaries were youth.



Adaptation Impact

- **Enhanced Water Security and Agricultural Sustainability:** The project increases the availability of water for agriculture by implementing a sustainable groundwater extraction system. This reduces the vulnerability of farmers to water scarcity and enhances agricultural sustainability on the island.
- **Protection of Groundwater Resources:** By preventing over-extraction and saline intrusion, the project safeguards the integrity of groundwater aquifers, ensuring a long-term, sustainable water supply for agricultural use and beyond.
- **Improved Food Security:** The project supports food security by increasing crop yields through reliable irrigation, reducing the impact of climate variability on agriculture.



Other Co-Benefits

- Protection of groundwater resources.
- Reduced risk of saline intrusion.
- Promotion of sustainable agriculture practices.



Innovation & Technology

- **Infiltration Gallery System:** Installation of an advanced groundwater extraction system designed to minimize impact on the environment and ensure sustainable water use.
- **Capacity Building:** Training for local farmers and stakeholders on the operation and maintenance of the system, as well as sustainable agriculture practices.
- **Monitoring and Management:** Implementation of a robust monitoring system to ensure the ongoing effectiveness of the infiltration gallery and the protection of groundwater quality.



Replication Potential

- The project is replicable in contexts where agricultural activity is hampered by the scarcity of surface fresh water, and where the integrity of the groundwater needs to be preserved.



Key Figures

- USD 286,789 project budget
- 1,822 people benefitted in total
- 13 international experts were engaged to deliver a training of trainers for 20 national participants
- 7 different national stakeholders engaged in project activities
- The project contributed to the following SDGs:

